To: Ayn Schmit/R8/USEPA/US@EPA;Gregory Oberley/R8/USEPA/US@EPA[]; regory Oberley/R8/USEPA/US@EPA[]
From: "Deb" <dthomas@nemont.net
Sent: Fri 9/28/2012 7:56:35 PM
Subject: Testing by USGS Demonstrates Contaminants Are Still Present in EPA Deep Monitoring Well Water Near Pavillion, Wyoming

Testing by USGS Demonstrates Contaminants Are Still Present in EPA Deep Monitoring Well Water Near Pavillion, Wyoming

In April and May 2012, the U.S. Geological Survey (USGS) sampled the water in a deep monitoring well that EPA installed in June of 2010 near Pavillion, Wyoming. The EPA monitoring well is screened at 233 to 239 meters below the ground surface. A second EPA deep monitoring well was not able to be sampled due to low water yield. Two water samples were collected from MW-01, one after purging the well 1.5 borehole volumes and one after purging 3 borehole volumes.

USGS released the results of the Monitoring Well testing on September 26, 2012. The water from monitoring well MW-01 contained Diesel Range Organics, Gasoline Range Organics, radioactive components Uranium, Radium 226 and Radium 228, and Methane, Ethane, and Propane. The water also contained the heavy metals Arsenic, Barium, Beryllium, Boron, Cadmium, Chromium, Lead, Mercury, Thallium and Titanium and 12 Polynuclear Aromatic Hydrocarbons including Naphthalene and Pyrene compounds and Phenol.

The chemical contaminants detected by USGS in the water from Monitoring Well MW-01 corresponded to the chemical contaminants identified by EPA in their testing of MW-01 water in April 2011. The chemical contaminants detected by USGS in the water from MW-01 that corresponded to gas drilling activities and hydraulic fracturing include Diesel Range Organics, Gasoline Range Organics, Methane, Ethane, Propane, Uranium, Radium 226, Radium 228, Cadmium, Chromium, Lead, Phenol and the PAHs including Naphthalene and Pyrene compounds.

The potential causes of contamination of the aquifer water by gas drilling and hydraulic fracturing activities in the Pavillion area according to EPA include:
-sporadic bonding or no cement in a number of production wells over large vertical distances and directly above intervals of hydraulic fracturing
-little lateral and vertical continuity to hydraulically fractured tight sandstones
-no barriers to stop upward vertical migration of aqueous constituents of hydraulic fracturing.

In 2007, Pavillion area residents requested that the Environmental Protection Agency (EPA) conduct an investigation of impacts to groundwater in their community. Residents made the request because of changes that occurred in their private drinking and stock water wells. Private drinking well water that suddenly turned black, hydrocarbon odors in well water, and oily sheens on well water were among the changes. The concerned residents had made the same requests to Wyomingstate agencies before contacting the EPA.

For more information contact:

Wilma Subra, Subra Company—337-367-2216

John Fenton, Pavillion Area Concerned Citizens--307-709-2540

Deb Thomas, PowderRiver BasinResource Council--307-645-3236